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10/765,146

01/28/2004

Guerino G. Sacripante

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OLIFF & BERRIDGE, PLC.

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

MCCULLEY, MEGAN CASSANDRA

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

12/10/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27074@oliff.com

jarmstrong@oliff.com

| | | | |
|------------------------------|--------------------------------------|------------------------------------------|--|
| Office Action Summary | Application No. 10/765,146 | Applicant(s) SACRIPANTE ET AL. | |
| | Examiner Megan McCulley | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-7,10,11 and 13-38 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 and 24-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-7, 10, 11, 13-16, 21-23, 30-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 5-7, 21, 32, 33, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. Pat. 6,210,853) in view of Schimmel et al. (U.S. Pat. 6,197,883).

Regarding claims 1 and 3: Patel et al. teaches a process for forming a curable powder/toner comprising in an aqueous dispersion/latex, aggregating particles (abstract) such as a sulfonated polyester resin (col. 1 lines 45-49), coalescing (abstract) adding catalyst/curing agent (col. 4 lines 10-15) and removing/isolating the particles/toner (abstract). The sulfonated polyester resin is a curable resin since it is reacted with styrene-butylacrylate-sulfopropylmethacryate (col. 5 lines 35-36) and further cured with persulfates (col. 7 lines 1-5). The acrylate functionalizes the sulfonated polyester in order to make it curable.

Patel et al. does not teach the resin is the elected epoxy or the curing agent is the elected polyfunctional amine. However, Schimmel et al. teaches a powder comprising an epoxy (abstract) formed together with an amine functional acrylate polymer (col. 7 lines 44-67). Patel et al. and Schimmel et al. are analogous art since they are both concerned with the same field of endeavor, namely powders incorporating a resin and a curing agent. At the time of the invention a person having ordinary skill in

Art Unit: 1796

the art would have found it obvious to combine the reactants of Schimmel et al. with the method of Patel et al. and would have been motivated to do so to create a particle with excellent appearance and corrosion resistance, as evidenced by Schimmel et al. (col. 1 lines 30-50).

Regarding claims 5 and 6: Patel et al. teaches mixing with a colorant such as a pigment (col. 1 lines 45-49).

Regarding claim 7: The result of isolating the particles/toner of Patel et al. is a curable powder.

Regarding claim 21: Patel et al. teaches a polyester resin (col. 1 lines 45-49) while the combination above lays out motivation for including the elected epoxy resin.

Regarding claim 32: Patel et al. teaches heating to a temperature below the Tg of the resin to aggregate the particles (col. 4 lines 19-21).

Regarding claim 33: Patel et al. teaches heating the aggregate particles to above the Tg of the resin to coalesce the particles/toner (col. 4 lines 23-27).

Regarding claim 36: Patel et al. teaches a geometric size distribution, GSD, from 1.15-1.24 (col. 4 line 63), which overlaps the claimed range.

Regarding claim 37: Patel et al. teaches a styrene-acrylate resin/poly(styrene-acrylate) (col. 6 line 26).

Regarding claim 38: Patel et al. teaches cyan, magenta and yellow pigments (col. 11 line 54).

Art Unit: 1796

Claims 10, 11, 13-16, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. Pat. 6,210,853) in view of Schimmel et al. (U.S. Pat. 6,197,883).

Regarding claims 10 and 11: Patel et al. teaches a process for forming a curable powder/toner comprising in an aqueous dispersion/latex, aggregating particles (abstract) such as a sulfonated polyester resin (col. 1 lines 45-49), coalescing and removing/isolating the particles/toner (abstract). Further, Patel et al. teaches the process takes place in the presence of an initiator and catalyst/curing agent (col. 4 lines 5-8). The sulfonated polyester resin is a curable resin since it is reacted with styrene-butylacrylate-sulfopropylmethacrylate (col. 5 lines 35-36) and further cured with persulfates (col. 7 lines 1-5). The acrylate functionalizes the sulfonated polyester in order to make it curable.

Patel et al. does not teach the resin is the elected epoxy or the curing agent is the elected polyfunctional amine. However, Schimmel et al. teaches a powder comprising an epoxy (abstract) formed together with an amine functional acrylate polymer (col. 7 lines 44-67). Patel et al. and Schimmel et al. are analogous art since they are both concerned with the same field of endeavor, namely powders incorporating a resin and a curing agent. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the reactants of Schimmel et al. with the method of Patel et al. and would have been motivated to do so to create a particle with excellent appearance and corrosion resistance, as evidenced by Schimmel et al. (col. 1 lines 30-50).

Regarding claims 13 and 14: Patel et al. teaches mixing with a colorant such as a pigment (col. 1 lines 45-49).

Regarding claim 15: The result of isolating the particles/toner of Patel et al. is a curable powder.

Regarding claim 16: Patel et al. teaches the particle size is from 50-250 nanometers, which is 0.05-0.25 microns (col. 5 lines 12-14).

Regarding claims 22 and 23: Patel et al. teaches a polyester resin (col. 1 lines 45-49) while the combination above lays out motivation for including the elected epoxy resin.

Claims 1, 3, 7, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sacripante et al. (U.S. Pat. 5,989,629) in view of Schimmel et al. (U.S. Pat. 6,197,883).

Regarding claims 1 and 3: Sacripante et al. teaches a process comprising aggregating a polymer latex/aqueous dispersion of resin such as a curable sulfonated polyester resin or styrene resin (col. 4 lines 30-40) and coalescing (col. 3 lines 40-45) with a vinyl monomer (abstract) and further with a persulfate/curing agent (col. 9 line 50) followed by drying (col. 6 line 44), which would inherently remove the particles from the aqueous dispersion. The sulfonated polyester resin is a curable resin since it is reacted with a vinyl monomer and further cured with persulfates. The vinyl monomer functionalizes the sulfonated polyester in order to make it curable.

Art Unit: 1796

Sacripante et al. does not teach the resin is the elected epoxy or the curing agent is the elected polyfunctional amine. However, Schimmel et al. teaches a powder comprising an epoxy (abstract) formed together with an amine functional acrylate polymer (col. 7 lines 44-67). Sacripante et al. and Schimmel et al. are analogous art since they are both concerned with the same field of endeavor, namely powders incorporating a resin and a curing agent. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the reactants of Schimmel et al. with the method of Patel et al. and would have been motivated to do so to create a particle with excellent appearance and corrosion resistance, as evidenced by Schimmel et al. (col. 1 lines 30-50).

Regarding claim 7: The result of isolating the particles of Sacripante et al. is a curable powder.

Regarding claims 34 and 35: Sacripante et al. teaches a polyester resin in an amount of 75-95 percent and from about 5-25 percent of titanium oxide, which is a colorant (col. 7 lines 8-14), which overlaps the claimed ranges.

Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (U.S. Pat. 6,210,853) in view of Schimmel et al. (U.S. Pat. 6,197,883) as applied to claim 1 above and in further view of Davydov et al. (U.S. Pat. 6,491,973).

Regarding claims 30 and 31: Patel et al. teaches the basic process as set forth above. Not disclosed is dry-blending the fused particles with at least one additive. However, Davydov et al. teaches dry-mixing/dry-blending particles with additives such

Art Unit: 1796

as filler (col. 2 lines 26-31). Patel et al. and Davydov et al. are analogous art because they are both concerned with the same field of endeavor, namely resin particles for coating metal substrates. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the dry-mixing technique of Davydov et al. with the process of Patel et al. and would have been motivated to do so for such desirable properties as a more homogenous coating composition.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 5-7, 10, 11, and 13-38 have been considered but are moot in view of the new ground(s) of rejection.

However, the arguments that are relevant to the above rejection will be discussed below.

A) Applicant's argument that the particles disclosed in Patel et al. and Sacripante et al. are not curable is discussed above in the rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 1796

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 10/765,146

Page 9

Art Unit: 1796

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/M. M./
Examiner, Art Unit 1796